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INFORMATION REPORT

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 SUBJECT Elias Uranium Refining in Jachymov

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Comment: All points to which reference is made in the following report will be found in Enclosure (C) unless otherwise indicated.

1. "The refinery of the Elias mine in Jachymov has the highest output of pure uranium ore of all the mines and refineries of the Jachymov area, and employs 50 civilians and 250 prisoners. The refinery processes uranium ore from the old 'pile' of the Rovnost mine, ore from the Elias mine (Elias and Jirina pits), and ore from the Rovnost and Eva mines. The ore from the Rovnost 'pile' (point 1) has the highest radioactive content and is residue from the days when silver ore was produced at Rovnost. I shall give a step by step report on the processing of uranium ore at the Elias refinery.
2. "At the mines the ore is loaded on carts by means of a shovel conveyer (point 2) and transported to the so-called 'reserve piles' (zasobni haldy, points 4 and 5) by a narrow-gauge railway (point 3). From the reserve piles the ore is placed on special steel grills where it is crushed into smaller pieces. A conveyor belt under the grill transports the smaller pieces of ore to the crushers. The ore from the conveyor falls into two sieves (point 7) and is sorted into two size categories. Smaller pieces of ore fall on another conveyor belt and are transported to the sorting plant (points 8 and 12). Larger pieces are transported by special short belts to individual crushing machines (points 9, 10 and 11). After processing in the crushing machines the ore, consisting of pieces of three cm diameter, is transported by the main belt to an automatic scale (point 13) where it is weighed. The weighed material goes into two large wooden reservoirs (point 14) of 30 tons capacity each.

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3. "From the reservoirs the ore is transported by short belts (point 15) into conic rotation sieves (point 16). Here the ore is sorted in water into three categories (small, medium and large). The small pieces are transported in water to a special device called 'sazecka'. There are nine such devices in which the uranium ore is separated from the waste. This device, 'sazecka', is a metal cylinder with a vibrating membrane. The heavier pieces of ore remain on the bottom and go into a barrel (point 28a) and the rest of the material is flooded in water (point 26) into another special device with two vibrating sieves (point 22a).
4. "The pieces of medium size which arrive from the conic rotation sieves are flooded by water into spiral crushers (point 20) where they are again divided into smaller and larger categories. The small pieces go into the 'sazecky' (point 21) and are processed by vibration sieves. Larger pieces go into the vibration sieves into which the material from the 'sazecky' also enters, and is sorted again into two categories. Smaller pieces again go into two 'sazecky' (point 21a) where they are finally sorted into pure uranium ore and larger radioactive material.
5. "The large pieces from the vibration sieves go in water into a reservoir (point 29). There are four such reservoirs into which all material remaining after processing comes. This material includes the following:
 - (a) Large pieces from the conic rotation sieves.
 - (b) Material from the 'sazecky' (point 21) arriving by a canal (point 24).
 - (c) Material from the vibration sieves.
 - (d) Material from the 'sazecky' going by a canal (point 27).
6. "The ore from the 'sazecky' (points 21, 21a and 22) goes into a pipeline (point 28a) and is tested as to its purity and radioactivity. If the material shows the desired quality, it is put into barrels and forwarded to the drying plant. If the material does not possess the desired quality it is stored in reservoirs (point 34). (The 'sazecky' are far from being reliable and a large amount of material is sent for further processing in the crushers.)
7. "From the reservoir (point 29), material is forwarded by conveyors (point 30) to vibration sieves (point 30a) where it is sorted into two categories according to the size of the ore. Small material is forwarded into a 'sazecky' (point 31); large pieces are forwarded by conveyors to the round crushers where they are crushed into fine sand. The larger material from the 'sazecky' (point 31) goes into the round crushers; pure uranium ore is forwarded by a pipeline (point 28) into metal barrels.
8. "The ground material from the round crushers (point 32) is forwarded by a pipeline (point 33) into storage (point 34). This ground material is called 'dregs' (rmut). The material stored in the reservoir (point 34) is pumped by 10 pumps (point 36) through a pipeline (point 35) into a reservoir located in the upper part of the second floor. From these reservoirs, the material arrives by its own weight ^[sic] on the second floor where there are 51 tables called 'splav' (point 38), and on the main floor which has 50 such tables (point 39). The tables called 'splavy' (sluices) are made of concrete and their upper parts are equipped with grooves which vibrate, thus sorting the material coming from the reservoir. The heavy material is pure uranium ore; the light material is called 'hlusina' (waste).
9. "The waste goes from the tables through a canal (point 41) into a waste hole (point 45). The material in the waste hole still has some 7.5 to 8% of radioactivity and is to be processed sometime in the future.

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10. "The pure uranium ore, after having been dried, is stored in metal barrels. All uranium ore produced during the shift must go first into a reservoir where it is mixed with other ore in order to maintain a uniform quality of ore. The samples are taken from this ore in the reservoir and tested in the radiometric station (laboratory, point 40a). From the reservoir, the ore is transported by conveyors into the drying plant (point 42) where it is dried on tables heated with steam. The dried ore goes into the OTK division (Odborna technická kontrola - Expert Technological Control, point 44). In this division all iron parts are removed by means of a large electromagnet. Here again, the ore is mixed with other ore, samples are taken, radioactivity measured, and the ore is weighed and stored in metal barrels. When the barrel is full, the top is welded to it by means of an autogenous machine; then the barrel is weighed again and is provided with various signs describing the ore. Each barrel has a description sheet with the whole story of the processing and each barrel contains 80 kg of pure uranium ore. During each eight-hour shift, 10 tons of pure uranium ore is produced from a total of 250 - 270 tons of processed uranium ore.
11. "Barrels of pure uranium ore are transported every afternoon by Tatra 111 trucks to some place in the area of Jachymov. Every truck is accompanied by a member of the factory militia, armed with a pistol and a submachine gun. (I do not know the exact place to which the ore is forwarded.)
12. "As I mentioned before, ore from the old 'pile' of the Rovnost mine is processed in the refinery of the Elias mine. Thirty-three prisoners and three civilians work on the 'pile'. The ore is loaded by a shovel excavator (Skoda-500) into the carts which forward it into a reservoir and onto conveyor belts. The contents of each shovel of the excavator is 0.5 cubic meters. The conveyors are made of rubber, are approximately 80 centimeters broad and are driven by electromotors with a capacity of 25 kw. One of these belts which goes from the pile to the crushing plant is approximately 1,100 meters long. The second main belt from the crushing plant to the Elias refinery is approximately 400 meters long. The ore has a high degree of radioactivity. In addition to the main belts there are other belts, one from the Jirina mine which is connected with the main belt, and a belt for the waste (hlusina) which is forwarded to its own pile. The belts are located on a wooden structure and are hidden by wooden walls two meters high. The wooden walls are interrupted at one place where an apparatus for the measuring of radioactivity and a device for selecting pure uranium ore (smolinec - pitchblende) from the rest are located. The pitchblende is loaded in wooden boxes and sent to the OTK division in Vykanov [sic].
13. "The crushing station contains the following equipment: a Soviet-made 'Saimon' rotation crusher with a 40-ton per hour capacity and driven by a 'Malinin' 80 kw electromotor; three hammer crushers with a 10-ton per hour capacity and driven by three 'Reliance'-type, 25 kw, electromotors; and one hammer crusher with a capacity of between 15 and 20 tons per hour. The rotation crushers are steel cylinders, 2.5 to 3 meters in diameter, which contain manganese steel balls of various sizes and weights, the heaviest being about eight kilograms. The total weight of balls in one crusher is approximately five tons. The cylinders make some 20 turns a minute and are driven by a Brown-Boveri electromotor of 145 kw capacity. The refinery of the Elias mine contains 310 electromotors of various types and capacity from 0.15 up to 145 kw.
14. "The radioactivity of the ore in the Elias mine and refinery is measured by two kinds of radiometric devices which were supplied by the USSR. The smaller apparatus serves for measuring the radioactivity right on the pile and on the conveyor belt. After the radioactivity has been ascertained by the apparatus, the pitchblende is collected by hand from the conveyor and packed in wooden boxes. During one shift, two to three boxes of pitchblende are collected from the belt. The size of each box is 40 x 40 x 40 cm. The boxes with pitchblende are transported to the OTK in Vykanov.

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15. "The small apparatus for measuring radioactivity is rather simple. Its main parts are as follows: [See Diagram of the radiometric device Enclosure (D) to which numbers refer.]

- (1) Measuring tube fixed in an aluminum frame. A double-walled glass cylindrical tube with two electrodes lying two mm from each other. Each electrode has a cap. I do not know whether the tube is filled with gas or void of air.
- (2) An aluminum tube containing a slender axial wire. The tube has a bushing (metal lining) on each end. On one end a plug from the case of the measuring tube is switched in; on the other end a plug from the measuring apparatus is switched in. These aluminum tubes are of various lengths and are exchangeable.
- (3) Measuring apparatus proper. This measuring apparatus is composed of two condensers, two resistors, and two neon tubes.
- (4) Dry Battery of 70-115 V capacity. A cylindrical battery with four outlets. The battery is located in the same case as the measuring apparatus proper.
- (5) Switch. The switch connects the current between the battery and the measuring apparatus.
- (6) Headphones. These headphones are normal headphones as used in radiotelegraphy with 4,000 Ohms.

"The spare parts for these counters were in stock and were supplied by the USSR. The resistors were the same kind as those made by the German factory Siemens.

16. "The Measuring Apparatus functions as follows: The radioactive rays cause a momentary current which is interrupted by the two electrodes located at a distance of two mm from one another. Through the neon tubes, the condensers being charged or discharged are heard in the headphones as knocking. If the radioactivity of the ore is higher, the contact between the electrodes is better and results in faster charge or discharge of the condensers. The sensitivity of the apparatus can be regulated by changes in the tension of the battery. It often happened, when a new battery was used and tension of 115 V applied, there was a knocking in the headphones even without the radiation of the uranium ore. In such cases, the tension of the battery had to be lowered.
17. "The large radiometric apparatus works on the same principle. These counters have a glass tube in an aluminum case; however, the measuring apparatus proper is located in a separate case which is carried by the measurer on his back. This apparatus is very sensitive because it has a special electrode intensification device. The tone in the headphones is a long one; its intensity increases or decreases according to the amount of radioactivity. These counters are used primarily in the mines for detecting new uranium layers.
18. "The management of the mine is in the hands of a few Soviet officials who, however, are by no means experts. As far as the technological management of the mine is concerned, the whole matter is in the hands of Czech engineers."

- end -

- Enclosures:
- (A) Sketch map showing location of Elias mine and refinery, with legend.
 - (B) Sketch map of the Jachymov mining area showing Elias mine and prison camp, with legend.
 - (C) Plan of the Elias refinery with legend.
 - (D) Sketch of the Radiometric Device with legend.
 - (E) Plan of the OTK in Vykmanov, with legend.

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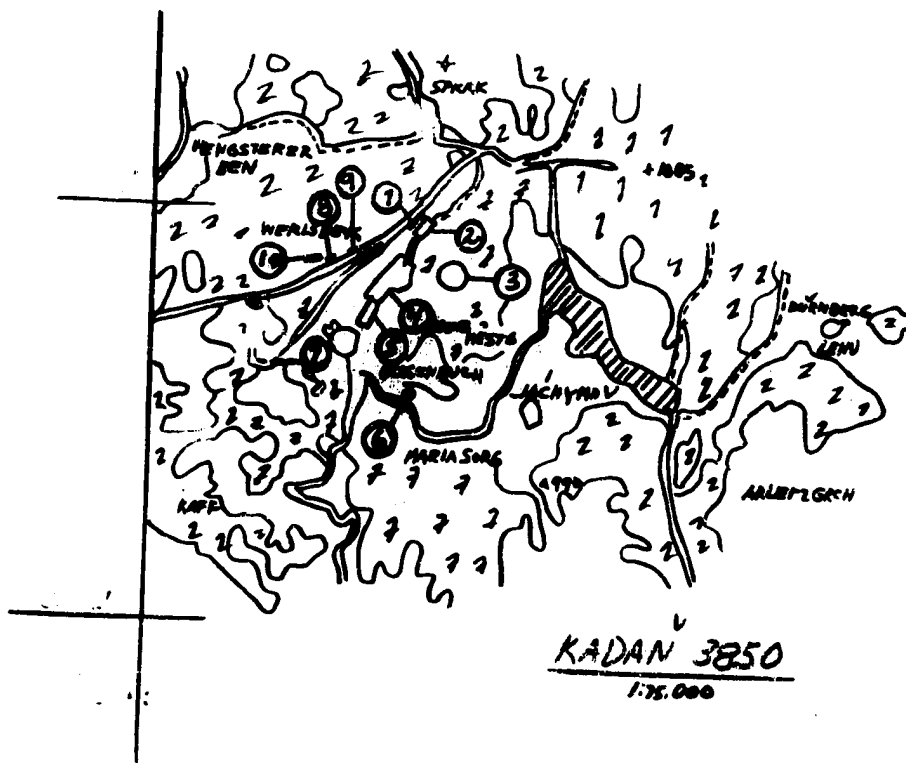
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Enclosure (A)

Legend:

1. Dwelling houses of camp Elias.
2. Prison camp Elias.
3. Area in which the Rovnost mine and "pile" (halda) are located.
4. The Elias mine and refinery (sorting plant).
5. Waste pit of the Elias refinery.
6. Area in which camp Marianska is located.
7. Area of the Eva mine.
8. Barracks of the National Security Corps (SNB - police), called "Vrsky" (Hills).
9. Transformer station "Vrsky"
10. Camp Barbora.

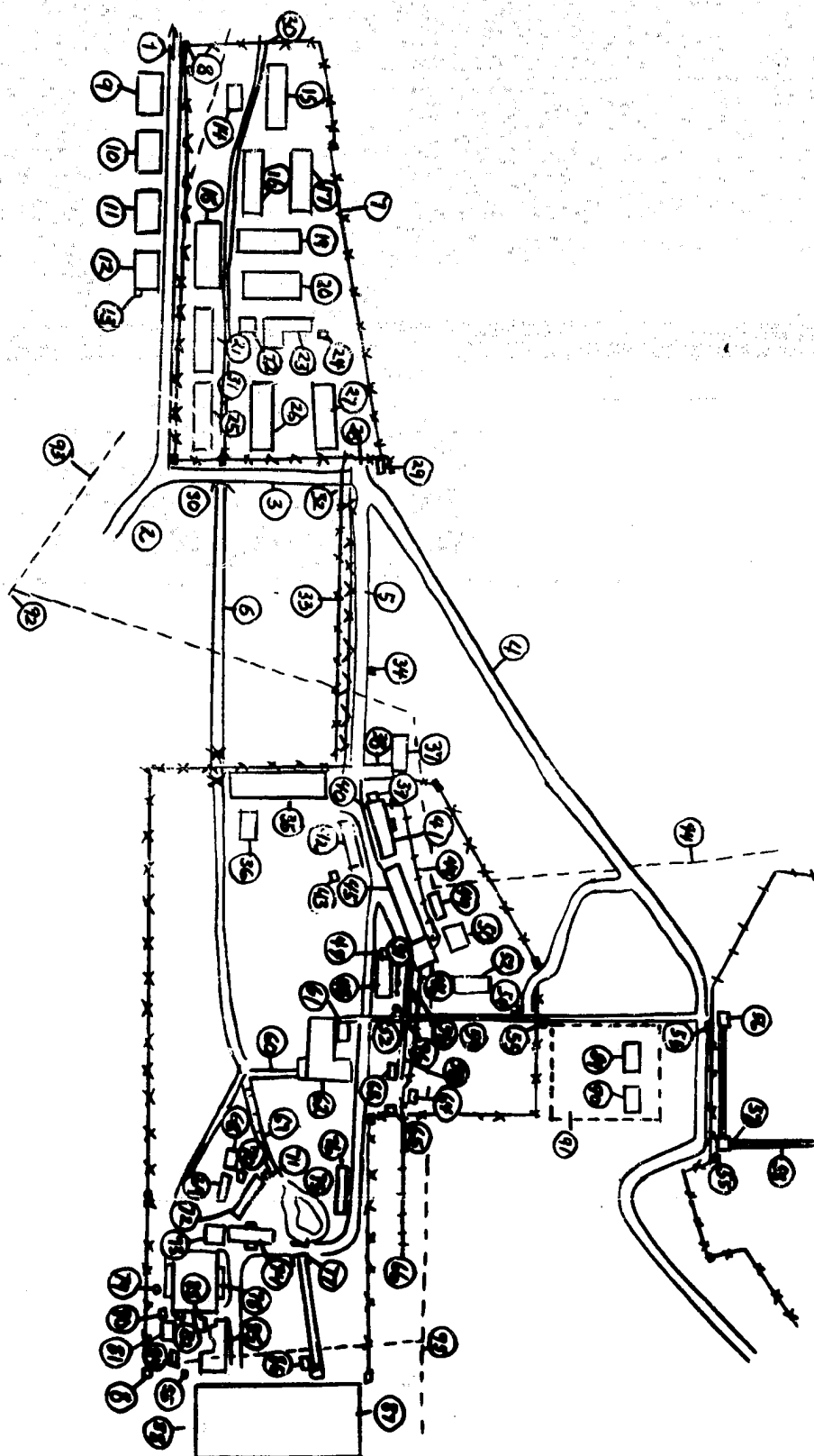


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ENCLOSURE (B) LEGEND

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1. Forest road toward the Eduard mine.
2. Forest road toward the barracks of the National Security Corps (SNB) on "Vrsky".
3. A road around the camp which divides into a road to the Eduard mine and to Vrsky.
4. A road toward the Elias mine and refinery and toward Jachymov. The road is in good condition.
5. Road from camp Elias to the Elias mine and toward the refinery of this mine.
6. Elias Creek; the creek goes from the Elias mine through the camp to the Eva mine.
7. Double fence, 3.5 meters high, made of barbed wire. The two barbed wire fences are three meters from one another. On both sides of the fence, at a distance of 1.5 - 2 meters, there is also a barbed wire which marks the so-called "shooting zone" (ostrelovaci pasmo). The "shooting zone" is covered with white sand in order to make it well visible. Between the two fences are poles, 20 meters from each other, with search lights containing bulbs of 200 W with the beam directed into the "shooting zone".
8. Observation tower, approximately five meters high, made of lumber. The cabin is 1.8 x 1.8 x 2 meters. On the tower are also fixed search lights with beams directed toward the camp as well as to the outside. One man of the SNB is on duty here; in the event of an alarm, two members of the SNB are on duty in the tower. Equipment of the guards consists of: one light machine gun, type CZ-26; one submachine gun with three magazines; one pistol, 7.65 cal. with two magazines; one rocket pistol with cartridges; hand grenades, (Skoda). The observation towers are connected with each other as well as with the command by a field telephone.
- 9 - 11. Dwelling houses of the employees of the Jachymov uranium mines; two-story wooden house, 20 x 12 meters.
12. A two-story wooden house, 20 x 12 meters, in which the guards-room of the SNB as well as the apartments of the SNB members are located.
13. A brick house containing an aggregator [sic] supplying electricity for the search lights in case the transformer station is out of order.
14. Rest rooms for the employees, a one-story wooden barrack, 15 x 6 meters.
15. Prisoners' quarters; a wooden barrack, 25 x 10 meters, called bloc VIII.
16. Same, called bloc V.
17. Same, called bloc VI.
18. Medical dispensary, a one-story wooden barrack, size 25 x 12 meters.
19. Hall of culture and storehouse for food; a one-story wooden barrack, 30 x 10 meters. There is a cellar under the house which serves as a confinement cell for the prisoners.
20. The command of the camp; a two-story brick building, some 50 years old. On the ground floor is a kitchen for the members of the SNB as well as for the prisoners, and a canteen where the prisoners are permitted to buy extra food for their money-marks. The camp's command is located on the second floor.
21. Prisoners' quarters; a wooden barrack, one-story, 30 x 10 meters.

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ENCLOSURE (B) LEGEND
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22. Wash room, a new wooden barrack, 7 x 7 meters, which was not quite finished when the report was written.
23. A one-story wooden barrack, shaped like an "L", with showers, wash-rooms, boiler room and coal storage.
24. A wooden kiosk with Communist propaganda literature. Here is also the bulletin board for announcements and reports on the outstanding achievements of the "activists" -prisoners.
25. Prisoners' quarters, a one-story wooden barrack, 30 x 10 meters, called bloc III.
26. Same, called bloc II.
27. Gate-keeper's lodge; a wooden barrack, 25 x 10 meters, with the offices of the labor-chief, offices of the "senior" of the camp, clothing and footwear storehouse, small culture hall, barber shop and Communist library.
28. A wooden gate with barbed wire. This gate has two parts: one part serves as exit to the road toward Jachymov; the other part serves as exit into the corridor through which the prisoners are conducted from the barracks to their working places.
29. The guards room of the SNB; a wooden barrack, 3 x 5 meters; the administrative office of the SNB is in this house. The side facing the camp has a wall made of concrete with loopholes.
30. Steel grill covering the gutter.
31. Concrete plates covering the creek which crosses the camp.
32. A wooden passage for civilians over the corridor.
33. A corridor made of barbed wire; the corridor leads from the camp to the Elias mine.
34. Observation tower, same construction and equipment as that described under point 8.
35. Lumber storage for the Elias mine. The storage is enclosed by wooden fence.
36. New workshops of the mine; a one-story brick building, 18 x 12 meters, with a forge, welding workshop and locksmith's workshop.
37. Canteen and dining room for the civilian employees of the Jachymov mines; a wooden barrack, 20 x 10 meters.
38. Gate-keeper's lodge and guard-room of the Elias mine; a ground floor barrack, 15 x 8 meters.
39. Fire station; a one-story wooden barrack.
40. Old Elias pit. This pit does not have a mining tower, but a mildly steep mining pit which goes 120 meters deep. Over the entrance to the pit is a wooden house, 12 x 10 meters. The carts are on rails in the oblique pit and are pulled by a motor. That part of the barrack in which the machines are located is made of bricks.
41. An old, two-story building, approximately 25 x 12 meters. On the ground floor are rooms of the OTK (Expert Technological Control) of the Elias mine. Here the ore is sorted and put into small wooden boxes. The boxes are forwarded by a Tatra III truck to a place somewhere in the area of the towns of Jachymov-Karlovy Vary. The ore is pitchblende, pure uranium ore and is probably forwarded to the OTK in Vyznamov. On the second floor of this house are the administrative offices of the OTK.

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ENCLOSURE (B) LEGEND
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42. Offices of the management of the Elias mine; a wooden one-story barrack, 25 x 10 meters.
43. Air-shaft (ventilation shaft) of the Elias mine. Over the shaft is a brick house, 3 x 3 meters.
44. Rails of a narrow-gauge railway of the Elias mine; the railway serves for the transportation of waste from the Elias pit to the Jirina pit where it is stored on a separate pile.
45. A two-story building of inspectorate No VII. On the ground floor is a radiometric station, boiler room, telephone centrale as well as the offices of the inspectorate. On the second floor are also offices of the inspectorate and a storage place for mining lamps. Size of the building, 50 x 15 meters.
46. New Jirina pit. The mining tower is 20 meters high; its base, 15 x 15 meters. Up to the middle, the tower is made of concrete. The pit is 43 meters deep and is connected by a corridor with the Rovnost mine, and by another corridor with the Elias mine. All radioactive ore produced in the Elias and Jirina mines is forwarded through the Elias pit to the surface and goes to the OTK for sorting. The waste from both pits goes through the Jirina mine to the surface and is forwarded by a narrow-gauge railway to a pile of waste (hlusina) which lies about 1.5 kilometers from the Jirina pit. Pure uranium ore, pitchblende is packed in the OTK in wooden boxes and is sent away for further processing. Other radioactive material is transported by conveyors to the refinery where the ore is separated from the waste. The waste is forwarded by conveyors to the narrow-gauge railway to be put on the special pile of waste material. The radioactive material is forwarded on conveyor belts to the crushing machines where it is processed together with the material which arrived from the Rovnost pit.
47. Transformer station of the Elias pit. A brick house, 4 x 6 meters.
48. Compressors for the production of compressed air for the Elias mine; the machines are located in a two-story brick building, 40 x 16 meters. On the ground floor are six compressors driven by electromotors of 100 kw capacity. On the second floor is a cabinetmaker's workshop, a technical office and an electrical workshop.
49. Storehouse of the Elias mine. A one-story wooden barrack, 15 x 6 meters.
50. Mining machinery of the Jirina mine; a one-story brick house, 17 x 17 meters.
51. Metallic reservoirs for compressed air for the Elias pit.
52. Maintenance workshops of the Elias mine; a one-story wooden barrack, 20 x 10 meters.
53. Reservoirs of uranium ore from which the ore is transported by Tatra 111 trucks, to the refinery of the Elias mine in case the conveyor belts are out of order.
54. A reservoir where the uranium ore which arrived from the Eduard and Eva mines by trucks is stored. Both reservoirs are made of wood.
55. Guards' room of the factory militia. Here one man of the militia is on duty; he is armed with a pistol with two magazines.
56. A new high building in which two crushers are to be installed. It was not
57. A reservoir for uranium ore which is used only in case the conveyors are out of order. The ore is then transported by trucks to the refinery of the Elias mine.

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ENCLOSURE (3) LEGEND

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58. Conveyor belt from the Rovnost "pile" to the reservoirs.
59. Conveyor belt from the reservoir to the crushing station. The length of this belt is approximately 1,100 meters.
- 59a. Conveyor belt from the Jirina pit to the Elias refinery.
- 59b. Conveyor belt, from the refinery to the narrow-gauge railway, for the transportation of waste.
60. Conveyor belt from the refinery to the crushing station; this belt is 400 meters long.
61. A one-story wooden house, 10 x 7 meters, in which the offices of inspectorate No VIII and ocil machines for electromotors are located.
62. Crushing station; a wooden building, 45 x 25 meters, approximately 18 meters high with a Soviet-made Saimons-type rotation crushing machine, with a capacity output of 40 tons per hour; three hammer crushers with a capacity of 10 tons per hour each; one hammer crusher with a capacity of 20 tons per hour. The crushing machines are driven by electromotors of various types.
63. Transformer station; a one-story brick building, 4 x 8 meters, with one mercury transformer of Soviet make, capacity 200A and one transformer of Czech make (CKD) with a capacity of 800A. Both transformers are for a tension of from 500 to 700 V; they supply the narrow-gauge railway with electricity.
64. (Unidentified.)
65. Guard hut of the factory militia.
66. Narrow-gauge railway from the pile of waste to the Eva mine. The railway is approximately three km long.
67. The Elias creek; the creek crosses the camp where it is covered with concrete plates.
68. A one-story brick building, 15 x 10 meters, with cabinet-maker's and vulcanization workshops.
69. A one-story wooden barrack, 20 x 15 meters, which serves as storage for the refinery of the Elias mine.
70. Lumber storage of the Elias refinery; a wooden barrack, 10 x 7 meters.
71. Fuel storage (oil, gasoline); a brick building, partly built beneath the surface, approximately 3 x 4 meters.
72. A one-story brick building, 30 x 18 meters, with a locksmith's, machine tool and welding workshop.
73. A wooden barrack, 15 x 15 meters, 10 meters high (approx), with concrete water reservoirs, each eight meters in diameter, and eight meters high.
74. Main warehouse of the Elias refinery, a wooden barrack, one-story construction, 30 x 8 meters.
75. Elias creek which forms a small pond here.
76. A wooden, one-story house, 30 x 10 meters, in which are located administrative offices of the Elias refinery as well as the technical and construction offices.
77. A wooden bridge over Elias creek.
78. Elias refinery; a wooden barrack on a concrete base; the roof is of various heights. The size of the base is 70 x 60 meters. In this building various devices for the refining (sorting) of uranium ore are located.

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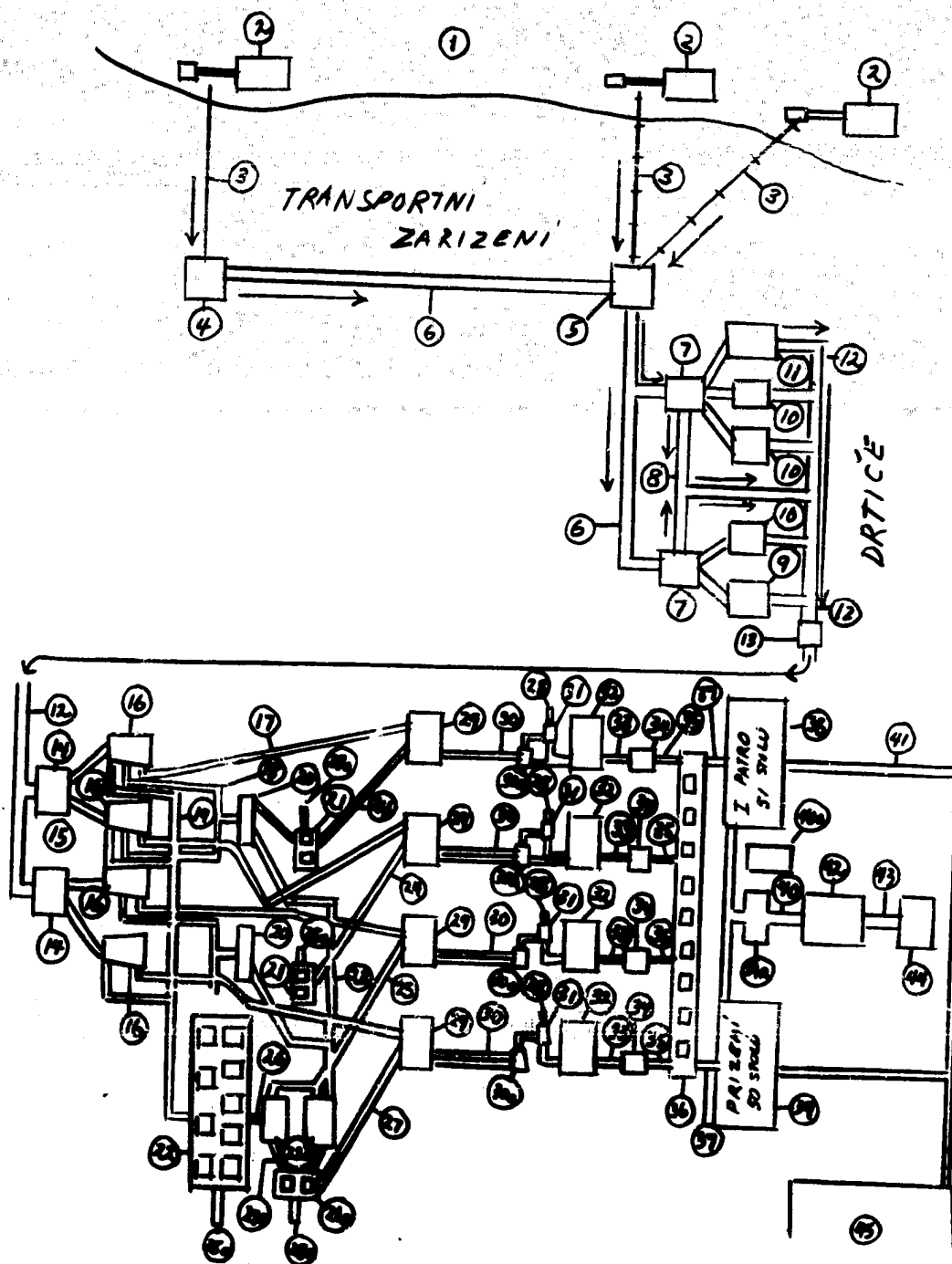
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ENCLOSURE (B) LEGEND
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79. Metal reservoirs for water (each 2,000 liters); the reservoirs supply the refinery plant with water.
80. Maintenance workshop; a small, one-story wooden house, 4 x 4 meters.
81. A two-story brick building, 17 x 15 meters. On the ground floor the laboratory of the Elias refinery is located; on the second floor are the offices and laboratory of inspectorate No VIII.
82. Radiometric station; a small, wooden house, 2.5 x 3 meters. In the station are devices for detecting radioactivity.
83. Drying plant for the uranium ore, a one-story, wooden barrack, 5 x 7 meters, in which steam heated tables for drying are located.
84. Transformer station of the Elias refinery, a brick building, 12 x 7 meters. In the building two transformers, each with 700 kw capacity are located.
85. OTK station of the Elias refinery; a wooden barrack on a concrete base. The house contains an office of the refinery, a room of the OTK and, in the basement, a boiler room. The boiler room supplies the refinery and drying tables in the drying plant with heat. The building is "L" shaped, 60 x 14 x 18 x 22 meters.
86. Water pumps, located in a barrack. A wooden construction, 8 x 5 meters. The pumps are centrifugal and are driven by two electromotors, of capacity 80 kw each.
87. Waste pit, 150 x 300 meters. In the waste pit there is waste material which still has between 7 - 8% of radioactivity.
88. Narrow path in the fields from the Elias refinery to the Eva mine.
89. Old brick building in which the command of the SNB from old Camp Elias was formerly located.
90. Old building, in which the canteen of old camp Elias was formerly located.
91. Area where camp Elias was formerly located.
92. Electric current of high tension 22,000V from the transformer station "Na Vrskach".
93. Same for the Eduard mine.
94. Same for the Rovnost mine.
95. Same for the Eva mine.
96. Automatic sorting device for the separation of the radioactive material from the waste.

ENCLOSURE (C)
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ENCLOSURE (C) LEGEND

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1. Rovnost "pile"; space approximately 400 x 50 meters.
2. Shovel excavator, Skoda 500-type; capacity of one shovel is 0.5 cubic meters.
3. Rails of the narrow-gauge railway from the excavator to the reservoirs and conveyors.
4. Reservoir (reserve piles) with a grill made of cross bars.
5. Same.
6. Conveyor belt made of rubber, which goes from the pile to the crushing plant.
7. Vibration sieve where the raw material is sorted into two categories.
8. Conveyor belt for the transportation of finer material; this belt goes from the vibration sieves to the main belt leading to the refinery.
9. A hammer crushing machine, capacity 15 - 20 tons per hour.
10. Three hammer crushers, capacity 10 tons per hour each.
11. Rotating crusher, Saimons-type, capacity 40 tons per hour.
12. Conveyor belt from the crushing plant to the Elias refinery.
13. Automatic scale.
14. Wooden reservoir, capacity 30 tons of ore.
15. Short belts from the reservoir to the conic rotation sieves.
16. Conic rotation sieves.
17. Canal for the transportation of larger pieces of ore to the reservoirs, ball crushers.
18. Canals for middle-sized material which go to the spiral sorters.
19. Canals for fine material going to the "sazecky"
20. Spiral sorters.
21. Four "sazecky"
- 21a. One "sazecka"
22. Nine "sazecky"
- 22a. Vibration sieves.
23. Canal for large material which goes from the spiral sorter to the vibration sieves.
24. Canals for large material which goes from the "sazecky" to the reservoirs, ball crushers.
25. Canal from the vibration sieves to the reservoirs.
26. Canal from the "sazecky" to the vibration sieves.
27. Same to the reservoirs, ball crushers.
- 27a. Same from the vibration sieves to the "sazecky".

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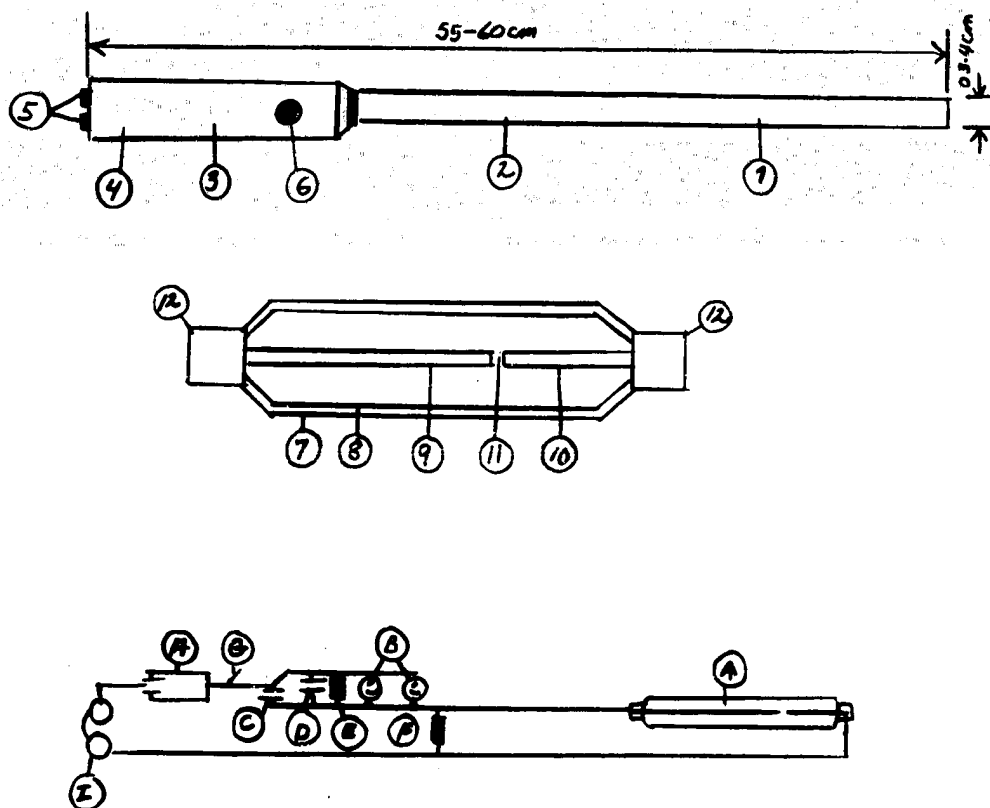
ENCLOSURE (C) LEGEND

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28. Outlet of pure uranium ore.
- 28a. Outlet of pure uranium ore (which may sometimes be somewhat solid).
29. Four reservoirs, each with a capacity of 10 tons of uranium ore.
30. Conveyor belts to the vibration sieves.
- 30a. Vibration sieves where the material is sorted into two categories.
31. A "sazecka".
- 31a. A conveyor belt from the vibration sieves to the ball crushers [sic].
32. Ball crushers. These ball crushers (round crushers) are cylinders of 2.5 - 3 meters in diameter which contain balls of various sizes and weights. In these crushers the material is crushed into fine sand.
33. Pipeline from the ball crushers to the reservoirs.
34. Reservoirs.
35. Pipeline from the reservoirs to the waste pumps.
36. Nine waste pumps.
37. Pipeline from the waste pumps to the reservoirs and to the tables called "splavy".
38. 51 tables ("splavy") (second floor of the sorting plant).
39. 50 tables ("splavy") (ground floor of the sorting plant).
- 39a. Reservoir in which all uranium ore produced during the shift is mixed.
40. Transportation of the ore from the reservoir to the dryers.
- 40a. Radiometric station where samples are taken; here the ore is again mixed.
41. Canal through which the waste is forwarded into the waste pit.
42. Dryers for uranium ore, equipped with drying tables heated by steam.
43. Transportation of uranium ore from the dryers into the OTK laboratory [sic].
44. OTK, Expert Technological Control of the Elias refinery.
45. Waste pit in the ground, size 150 x 300 meters.

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ENCLOSURE (D) LEGEND

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1. Round aluminum case in which a counting tube is set.
2. An aluminum tube which is exchangeable.
3. An aluminum case with a measuring apparatus and battery.
4. Space for a battery.
5. Bushings, holes with metal lining for the plugs of the headphones.
6. Switch.

COUNTING TUBE

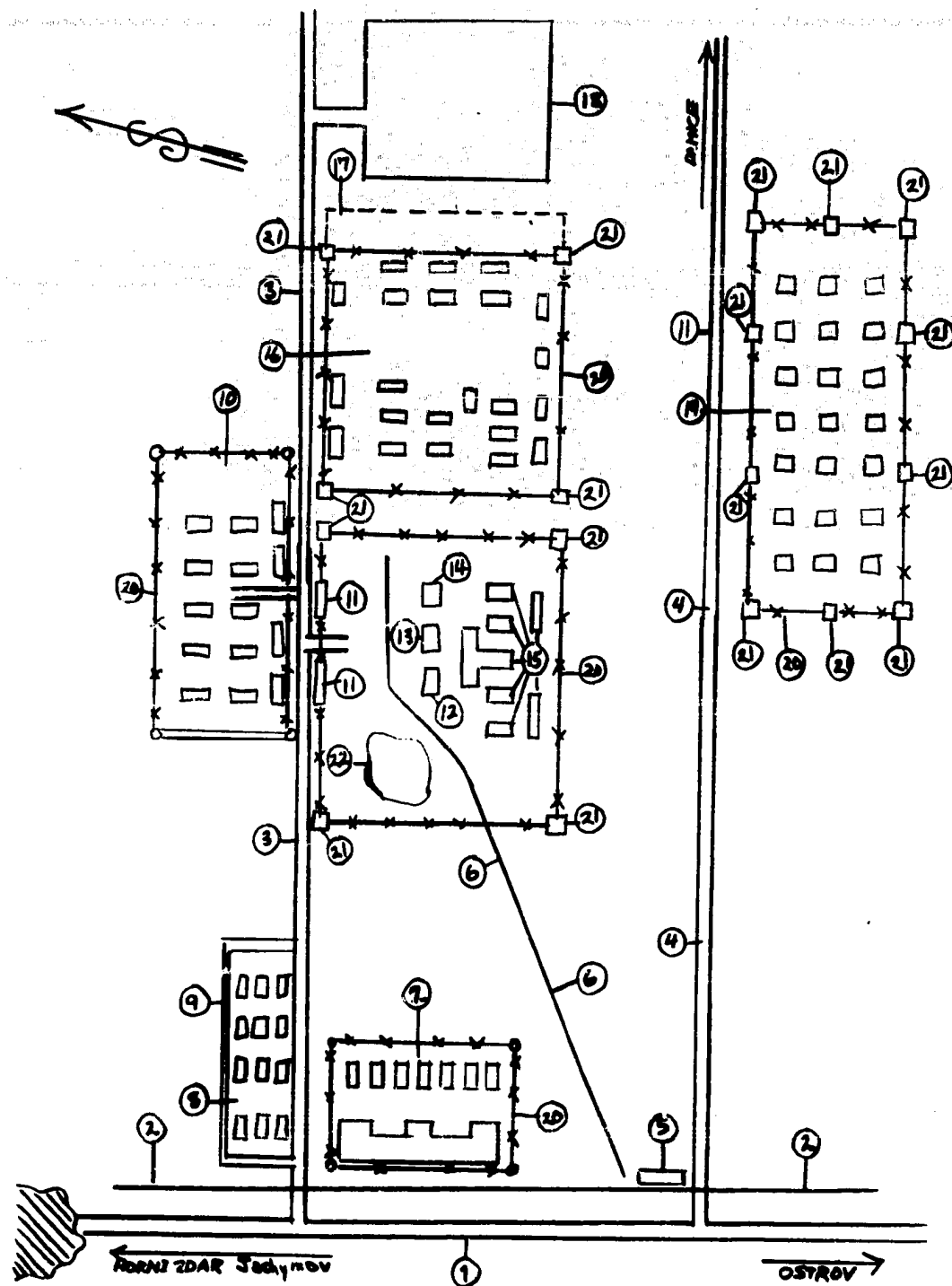
7. Outer glass wall of the tube.
8. Inner glass wall of the tube.
9. Long electrode.
10. Short electrode.
11. Space between the electrodes - 2 mm.
12. Brass caps connected with the electrodes.

SCHEME OF THE CIRCUIT OF THE RADIOMETRIC APPARATUS

- A. Measuring (counting) tube.
- B. Neon tube.
- C. Condenser (fixed).
- D. Condenser (fixed).
- E. Resistor.
- F. Resistor.
- G. Switch.
- H. Battery.
- I. Normal headphones.

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ENCLOSURE (E) LEGEND

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1. State highway Ostrov - Jachymov.
2. Single-track railway Ostrov - Jachymov.
3. A road (steamrolled) to the camp.
4. District road Dolni Zdar - Lamice.
5. Railway station in Dolni Zdar.
6. Rails from the railway station in Dolni Zdar to the Technological Control in Vykmánov.
7. Central storage of ore from the Jachymov uranium mines, called Kravin.
8. Main garages of the directorate of the Jachymov Uranium mines (passenger cars and trucks).
9. Stone wall, two meters high, around the garages.
10. Barracks of the SNB; main barracks for all camps in the Jachymov area.
11. Entrance to the establishments of the Technological Control and to the camp of prisoners who are employed there.
12. Ore mill where the ore is ground.
13. Ore refinery, located in the same building as the sorting plant for the uranium ore.
14. Final refining of ore before forwarding.
15. Prisoners' quarters (of prisoners working in the Technological Control Division - OTK).
16. Camp for sick prisoners who are unable to work in the mines.
17. Hurdle track for the SNB exercises.
18. A farm belonging to the Jachymov Uranium Mines.
19. Construction of new dwelling development for the civilian employees of the Jachymov mines. Prisoners were employed on the construction work.
20. Barbed wire fence, 2.5 meters high.
21. Watch towers around the Technological Control Division and the prisoners' camp as well as the prisoners' working places.
22. Piles of waste.

DIRECTORATE

4/732.17	27M
2/732.17	27M
732.17	27M
2/741.13	27M
2/744.411	27M